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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,040	09/12/2003	Priya Bendale	026471-4005	8322
30542	7590	06/07/2004	EXAMINER	
FOLEY & LARDNER P.O. BOX 80278 SAN DIEGO, CA 92138-0278			NGUYEN, HA T	
			ART UNIT	PAPER NUMBER
			2812	

DATE MAILED: 06/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,040

Applicant(s)

BENDALE ET AL.

Examiner

Ha T. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1-12-4.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

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Claim Objections

1. Claims 1-12 are objected to because of the following informalities: in claim 1, lines 12-13 and claim 9, lines 13-14, the use of “between each of the plurality of electrodes” is improper because the word “between” requires at least two things not one thing as indicated by “each”. Appropriate correction is required.

Claims 2-8 and 10-12 variously depend from claim 1 or 9, they are objected to for the same reason.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103[©] and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aoki et al. (USPN 6222720, hereinafter “Aoki”) in view of Amatucci (USPN 6198623).

Referring to Figs. 8-12 and related text, [Re Claim 1] Aoki discloses a method of making an electrode structure for use in a double layer capacitor, comprising the steps forming a plurality of electrodes 31, 32, each of the plurality of electrodes comprising: a current collector plate 31a or 32a, a coating 31b,c or 32b,c formed on a portion of each side of the current collector plate, the coating containing a mixture of carbon powder, a binder and a solvent (see col. 13, lines 14-

50); positioning a respective separator 33a or 33b between each of the plurality of electrodes while stacking the plurality of electrodes on top of each other such that the respective separator is juxtaposed against respective coatings of adjacent ones of the plurality of electrodes, wherein the respective separator electrically insulates the adjacent ones of the plurality of electrodes from each other, whereby forming a stack of the plurality of electrodes with a respective separator positioned in between respective ones of the plurality of electrodes; and rolling the electrode stack starting at one end of the electrode stack into a cylindrical structure (see col. 13, line 51- col. 14, line 9). But it does not disclose expressly the coating is formed by a secondary coating formed on a primary coating formed on a portion of each side of the current collector plate, the primary coating including conducting carbon powder and a binder. However, the missing limitation is well known in the art because Amatucci discloses this feature (See Example 1). A person of ordinary skill is motivated to modify Aoki with Amatucci to obtain increased specific capacity (see Amatucci, abstract).

[Re Claim 9] The combined teaching of Aoki and Amatucci discloses substantially the limitations of claim 9, as shown above. Aoki also discloses a current collector plate having a length and a width and a thickness; a primary coating formed on a portion of each side the current collector plate, the portion covering an area extending length of the current collector plate and extending a portion of the width of the current collector plate; a stack of the plurality of electrodes having a stack length and a stack width; and rolling the electrode stack starting at one end of the electrode stack along the stack length into a cylindrical structure (see Fig. 8 and col. 4, line 6- col. 5, line 21).

[Re claims 2-3, 5-7, 10-11 and 12] Aoki also discloses electrically coupling together a first set of respective ones of a portion of each current collector plate that do not have the respective coating formed thereon to form a first terminal; electrically coupling together a second set of respective ones of the portion of each current collector plate that do not have the respective coating formed thereon to form a second terminal; wherein the positioning while stacking steps are performed such that upon rolling the electrode stack, a portion of each current collector plate that does not have a respective coating formed thereon extends from a respective end of the rolled electrode stack; wherein the positioning while stacking steps are performed such that upon rolling the electrode stack, the portion of each current collector plate that does not have the

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respective coating formed thereon extends from an opposite end of the rolled electrode stack as extends the portion of each adjacent current collector in the electrode stack that does not have the respective coating formed thereon; and smearing together portions of the current collector plates extending from each end of the electrode stack into electrical contact with each other (see Fig. 8 and col. 7, lines 20-39); and

[Re Claim 4] inserting the rolled electrode stack into a capacitor can; coupling the first terminal first capacitor terminal of the capacitor can; coupling the second terminal second capacitor terminal of the capacitor can; saturating the rolled electrode stack in a prescribed electrolytic solution; and sealing the rolled electrode stack and the prescribed electrolytic solution within the capacitor can (see Figs. 8, 12 and col. 5, line 6-col. 8, line 55).

[Re Claim 8] The combined teaching of Aoki and Amatucci does not disclose the use of a conductive coating to a portion of the current collector plates smeared together at each end of the electrode stack. However it would have been obvious for a person of ordinary skill to use a conductive adhesive to connect the collector plates together at each end to ensure better contact between the plates.

Therefore, it would have been obvious to combine Aoki with Amatucci to obtain the invention as specified in claims 1-12 .

Conclusion

4. The prior art relevant to the disclosure of this application and not being used in the rejections.

US Patent 6339529 to Kasahara et al. for teaching the use of collector/electrode structure with graded composition of graphite and activated carbon.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha Nguyen whose telephone number is (571) 272-1678. The examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week. The telephone number for Wednesday is (703) 560-0528.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Neibling, can be reached on (571) 272-1679. The fax phone number for this Group is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Ha Nguyen

Primary Examiner

05- 26- 04